ABSTRACTS OF CURRENT LITERATURE

MEDICINE

PRIMARY TUBERCULOSIS OF THE MESENTERIC GLANDS.

(By Alfred F. Hess, *American Journal of Medical Sciences,* August, 1908.)

Hess prefaces his report of 3 cases of primary mesenteric tuberculosis by reviewing the previously reported cases in which the types (human or bovine) of infecting organism has been isolated.

He found 71 cases. In 44 of these cases (62 per cent.), the bacillus was of the bovine type. Of these 44 cases 41 occurred in children, three in adults. Of the 27 cases in which the human type of bacillus was isolated, 18 occurred in children, 9 in adults. Although these figures are of no value in determining the relative frequency of mesenteric gland infection in adults and children, they emphasize the importance of the mesenteric glands as a portal of entry.

The large number of cases with bovine infection in children cannot be attributed to their exposure to infected milk alone, as adults in a number of years must be similarly exposed, but he thinks we must admit a diminished resistance on the part of the child or a degree of immunity towards the bovine bacillus on the part of the adults. The course of the disease in both types of infection is the same. He emphasizes the importance of careful microscopical examination of the glands as animal inoculation with glandular tissue have proven negative, even though tubercle-bacilli has been found in these glands in some instances in large numbers. He concludes by reporting three cases of primary mesenteric tuberculosis—one in a child 3 years, 9 months, one in an infant 22 months, and one in a boy of 17 years. All these were instances of infection by the human type of bacillus, as shown by the morphology cultural characteristics, and virulence of the isolated strains.—(W. C. D.)

MORPHOLOGY OF THE BLOOD IN PERTUSSIS.

(Joseph M. Barach, *Archives of Internal Medicine,* July 15, 1908.)

Barach reviews the literature on this subject from the time Frolich of Breslau called attention to it in 1897. From this review he concludes that in pertussis there is a leucocytosis due to the lymphocytes, which begins in the catarrhal stage of the disease, reaches its height in the paroxysmal stage, and gradually subsides with the improvement of the clinical symptoms. Complications may or may not change the blood picture. Most of the authors reviewed think the blood picture of value in making an early diagnosis.

Barach has carefully studied the blood of fifty cases of pertussis and gives the tabulated results in the first thirty cases that came under his observation. He made control examinations of 29 normal children living under the same conditions as the children with the disease. In these and the children with the disease digestive leucocytis was excluded. The averages in these 29 normal children were as follows: Total leucocytes, 10.567; Polynuclears, 55.74; Small Lymphocytes, 35.92; Large Lymphocytes, 4.06; Transitionals, 0.54; Eosinophiles, 3.7.

In the thirty cases with pertussis—at the onset of the disease, the blood examination being made in the first week of the coughing, the averages were: Total Leucocytes, 17.539; Polynuclears, 50.06; Small Lymphocytes, 40.19; Large Lymphocytes, 5.02; Transitionals, 1.42; Eosinophiles, 3.02.

At the height of the disease the averages were: Leucocytes, 22.512; Polynuclears, 38.06; Small Lymphocytes, 51.52; Large Lymphocytes, 6.10; Transitionals, 0.78; Eosinophiles, 3.56. The counts when the patients showed marked clinical improvement averaged as follows: Leucocytes, 10.451; Polynuclears, 49.5; Small Lymphocytes, 39.61; Large Lymphocytes, 5.1; Transitionals, 1.21; Eosinophiles, 5.35.

Eight months later, when the children were in good health the averages were: Leucocytes, 10.355; Polynuclears, 58.0; Small Lymphocytes, 32.0; Large Lymphocytes, 4.0; Transitionals, 1.0; Eosinophiles, 5.0.

The children in both the control series and those with the disease ranged in age from 1½ to 7 years. One adult, a lady 72 years of age, was included in the 30 cases with whooping cough. She had no leucocytosis, but an increase in the small lymphocytes. In addition to the cells mentioned above in the differential counts he notes mast cells never exceeding 4 per cent. He also mentions bilobate, small lymphocyte, degenerate large lymphocytes and an occasional myelocyte. Four of his cases were complicated by pneumonia. When this occurred the polynuclears became the prominent cells; when the pneumonia subsided, the leucocytes fell, and lymphocytes increased in number returning to the pertussis formula. After his study of these cases he concludes that early in the disease there is a leucocytosis in which all forms are increased. Then there is a small cell lymphocytosis, which increases after the other forms have reached their limit. The large lymphocytes follow the small ones, but reach their limit after the small ones have reached theirs. With the patient's improvement the leucocytosis decreases, the lymphocytes diminish and the polynuclear cells gradually resume their normal proportions. During the decrease of the leucocytosis and the lymphocytosis an eosinophilia occurs lasting a variable time, after which the blood picture regains the normal.

The height of leucocytosis is reached during the paroxysmal stage, and the sickest children as a rule show the highest leucocytosis. He thinks the results are uniform enough to prove their value as a diagnostic measure and to clearly establish the blood picture of whooping cough.—(W. C. D.)

DIFFERENTIAL BLOOD COUNT AS AN AID IN THE DIAGNOSIS OF EMPYEMA OF CHILDREN.

(Louis Fischer, *Archives of Diagnosis*, July, 1908.)

Pus, be it localized in a small area or spread over a large surface, gives rise to two distinct cardinal symptoms: Fullness on percussion, and marked diminution or absence of the respiratory murmur. The temperature cure is peculiar; while in some instances the type of fever is one that will suggest intermittent fever; in other cases it may remain at or near normal.

Groccus triangle is not easily mapped out. The general practitioner will require considerable experience before familiarizing himself with this phenomena. He considers a high polymorphonuclear percentage the most valuable aid in strengthening the diagnosis, and reports the following cases:

Case 1. Small lymphocytes, 15.2 per cent.; polynuclear neutrophiles, 82.4 per cent.; large lymphocytes, 2.0 per cent.; eosinophiles, 0.4 per cent. The high polynuclear percentage supported the diagnosis and the puncture revealed pus.

Case 2. Large lymphocytes, 9 per cent.; small lymphocytes, 22 per cent.; polynuclear neutrophiles, 62 per cent.; eosinophiles, 1 per cent.; basophiles, 2 per cent.; mononeucleus, 4 per cent. The polyneuclear percentage of 62 per cent. in this case excluded the probability of pus and puncture revealed a serous fluid.—(W. M. McC.)

APPENDICITIS: EXTRA SIGNIFICANCE OF LEFT-SIDED PAIN.

(J. F. Erdman, *Archives of Diagnosis*, July, 1908.)

Erdman writes, I have called attention to the following to me, practically, pathognomic sign: "Almost invariably the little patient's place their hands in the region of the appendix to ward of manipulations in this region."

For more than half a decade I have called the attention of my consultants that pain, if present in the lower quadrant with evident tenderness, pain and resistance in the right quadrant (appendicitis in other words) and without any marked evidence of abdominal distention, signifies free fluid in the pelvic cavity, varying in character from a serous to a sero perulent in nature, although the appendix, or abscess, if present, is thoroughly walled off.

I do not recall making one failure in this diagnostic factor in a single case during this period of time. The amount of fluid is usually in excess of that ordinarily found in the pelvis and may be measured in ounces or half pints.—(W. M. McC.)

A PATHOGNOMORIC SYMPTOM (OR SIGN) OF APPENDICITIS NOT HITHERTO DESCRIBED.

(H. Illoway, *Archives of Diagnosis*, July, 1908.)

The patient is placed full length upon the table for examination. The leg is flexed upon the thigh and the thigh upon the abdomen; it is then extended at full length with a quick or rather sudden movement. If pain is produced in region of the appendix, he considers it pathognomic of appendicitis.

It may happen that forced flexion of the thigh on the abdomen, will produce pain, but if this is not due to appendicitis there will be no pain or soreness. He considers the extensoin of more value than the flexion.—(W. M. McC.)

SOME EXPERIMENTS IN THE TREATMENT AND PREVENTION OF INFECTION IN ENTERIC FEVER.

(*The Practitioner*, London, Vol. lxxxi., No. 2, Aug., 1908.)

A. Knyvett Gordon states that there are few drugs that have not been given in this disease, but it is not clear whether the change for the better be due to the administration of the particular remedy or the alterations in diet.

The experiments with drugs have been directed mainly toward the group of so-called intestinal antiseptics, in the hope of finding some chemical preparation, which would kill the bacteria in situ, or modify their power of toxin formation.

It is not pretended that any chemical preparation will neutralize the circulating toxins; and can only in theory prevent their formation by killing the organism. Any antiseptic must be soluble or insoluble in fluids of the digestive tract. If soluble the chances are that it will be absorbed before it reaches the intestinal ulcers; if insoluble it is usually passed per rectum unchanged, and has been an irritant to the inflamed intestinal lining. It is the belief of most of those who have to treat enteric fever in bulk that drugs are useless except for the relief of certain well-marked symptoms.

Gordon, after an extensive experience with chlorine solutions, salol, beta-naphthol, creosote, thymol, and menthol, has abandoned them all because he could not convince himself that they modified the course of the disease, but they did increase peristalsis or interfere with the appetite.

It is evident that the B. typhosus is present in the circulating blood in a large per cent. of cases, therefore greater numbers of bacilli are to be found in the duodenal region than in the neighborhood of the ulcers. The bile also contains large numbers. Then they may be found in the urine in large numbers.

If we are to attempt to destroy the typhoid bacilli themselves, we must attack them in the circulating blood or in the higher region of the intestine, and it is probable we can control our results to a certain extent by observing whether the urine ceases to contain organisms of coli-typhoid groups. It is essential to select a drug that shall be highly bactericidal to B. typhosus, easily absorbable, non-toxic, and is not chemically changed by the presence of organic matter in excess. These requirements would be likely to be best fulfilled by a preparation called Medical Izal Oil. Tunnicliffe found by experiments on animals that Izal was intensely toxic to the lower forms of animal and vegetable life, and that, as the scale ascended its toxicity diminished. He found also that it had a diuretic and diaphoretic action when given internally.

Gordon gives it in the form of an emulsion, three minims to the ounce, and gives two ounces of this every two hours during the day and every four hours at night, the dose being followed in each case by a draught of water. Other drugs were given for the treatment of symptoms only, and in practice these included alcohol and opium, with chloral or bromide of potassium occasionally as a hypnotic. All patients were given as full and varied a diet as possible, and encouraged to drink freely of water.

Izal has some considerable value from the public health point of view. The record shows that the urine of those patients to whom it was given, ceased to contain bacilla of the coli-typhoid group shortly after its administration. The urine in typhoid fever patients can be sterilized quite easily by such drugs as urotropin and hemitol, but the urine is apt to contain organisms again as soon as the drug is discontinued. In the Izal series the sterility was usually maintained. Gordon would regard Izal, therefore, as a general antiseptic, rather than an intestinal or urinary disinfectant.

Summing up the results of this and of previous work on the subject, it is evident that:

1. Medical Izal Oil is a peculiarly efficient germicide in vitro for bacilli of the coli-typhoid group.

2. It can be given internally in the form of an emulsion in large doses without any ill effects, and its administration can be continued for a prolonged period.

3. It does not disturb the appetite of the patient to whom it is administered. After the first two or three doses the patients do not, as a rule, dislike it.

4. It does not increase peristalsis, and in practice tends to check diarrhœa when this is already present.

5. It acts as a diuretic and as a diaphoretic, and, therefore, increases the elimination of circulating toxins.

6. When bacilli of the coli-typhoid group are present in the urine, they usually disappear when Izal is given, and, provided that the drug is administered for a sufficiently prolonged period, the organisms do not reappear when the patient is apparently well.

7. This germicidal effect as regards the urine is not given by other antiseptics that are commonly given in enteric fever.

8. So far as these observations go, the case mortality is considerably diminished by the administration of Izal, and the disease is prone to run a more favorable course, especially in the acute stage.

9. These beneficial results have occurred, notwithstanding the fact that the administration of the drug was not begun, as a rule, until the end of the second week of the attack, and in a series from which all mild cases are eliminated.—(O. N. B.)